

NOWPAP MERRAC

Northwest Pacific Action Plan
Marine Environmental Emergency Preparedness and Response
Regional Activity Centre
Website - <http://merrac.nowpap.org>



The Activities of MERRAC for Oil and HNS Spills Preparedness and Response in the NOWPAP Region

2015 PICES Annual Meeting
15 October 2015, Qingdao, China

Seong-Gil Kang, Jeong-Hwan Oh, Yoon Young Back,
Jung Hyun Lim, Bo Sik Kang
NOWPAP MERRAC

Contents

1 Introduction

2 Oil and HNS Spill Risks in the NOWPAP Region

3 NOWPAP Regional Oil and HNS Spill Contingency Plan

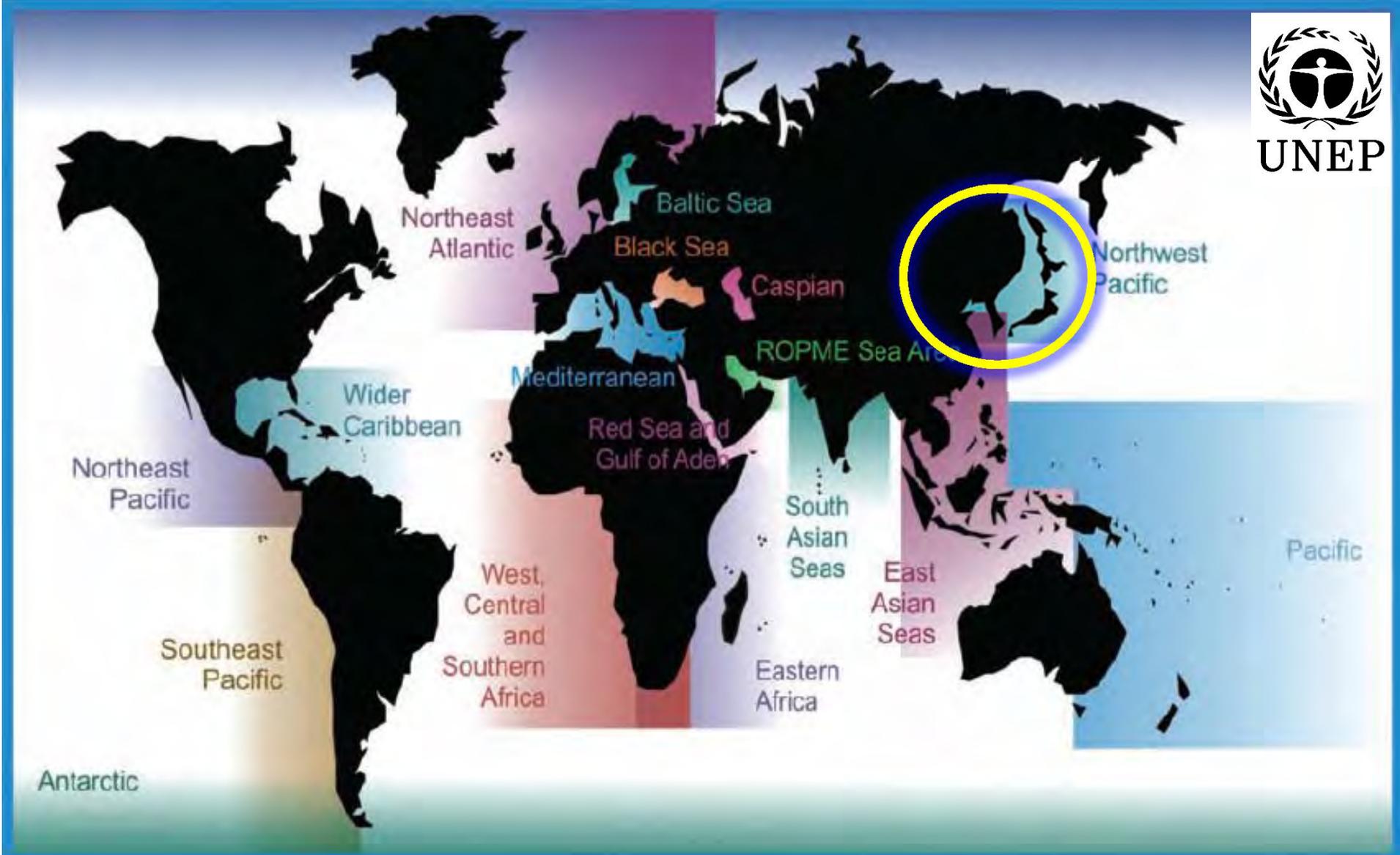
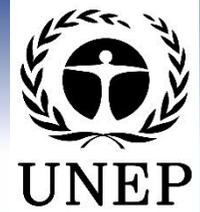
4 MERRAC Activities for Facilitating Regional Co-operation
on Marine Pollution Preparedness and Response

5 Summary and Conclusion

I. Introduction

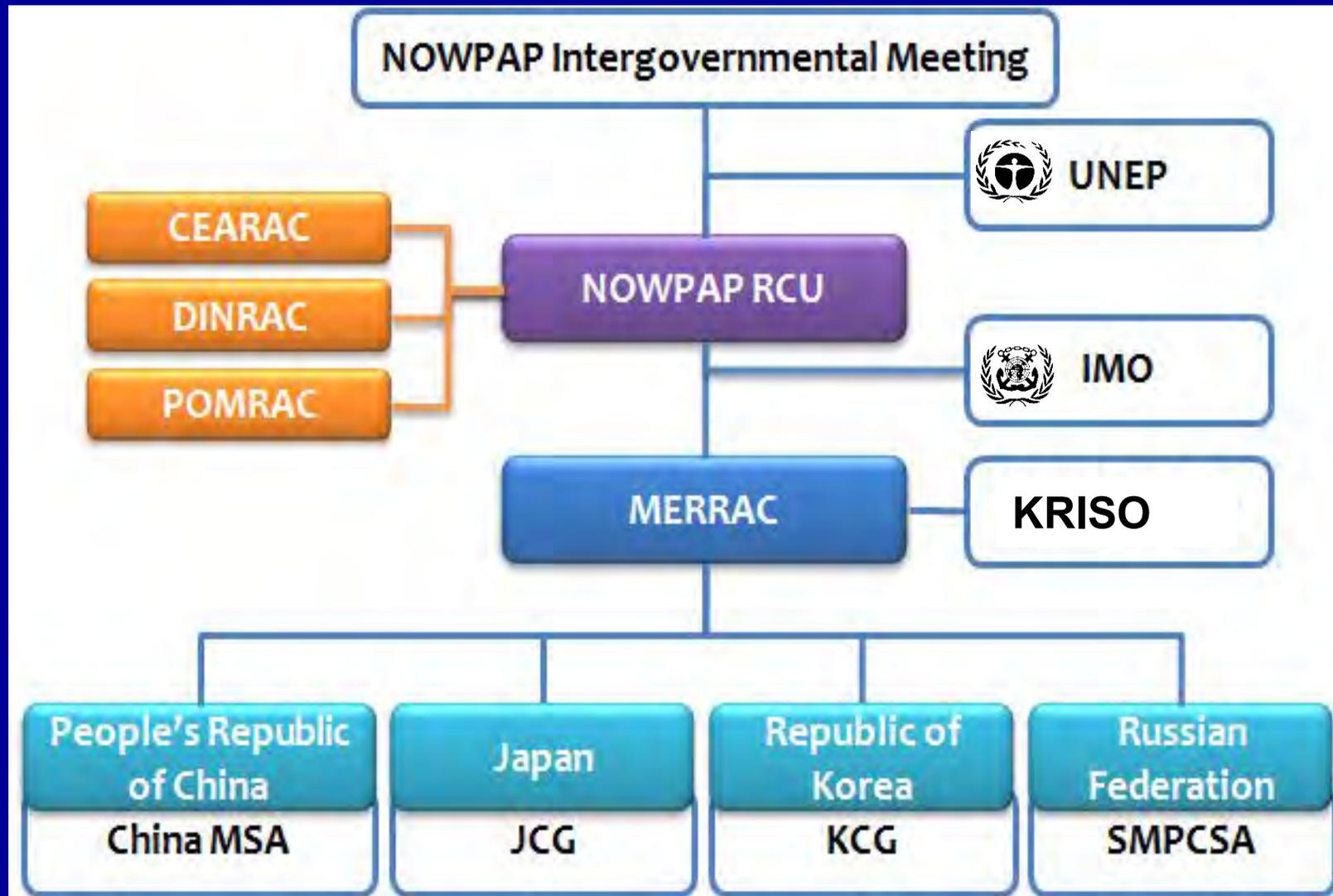


NOWPAP – UNEP's Regional Seas Programme

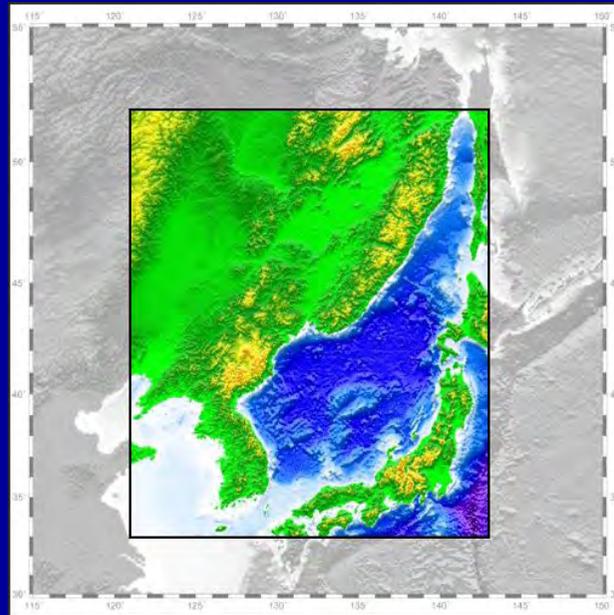


adopted by China, Japan, R. Korea, Russia in 1994

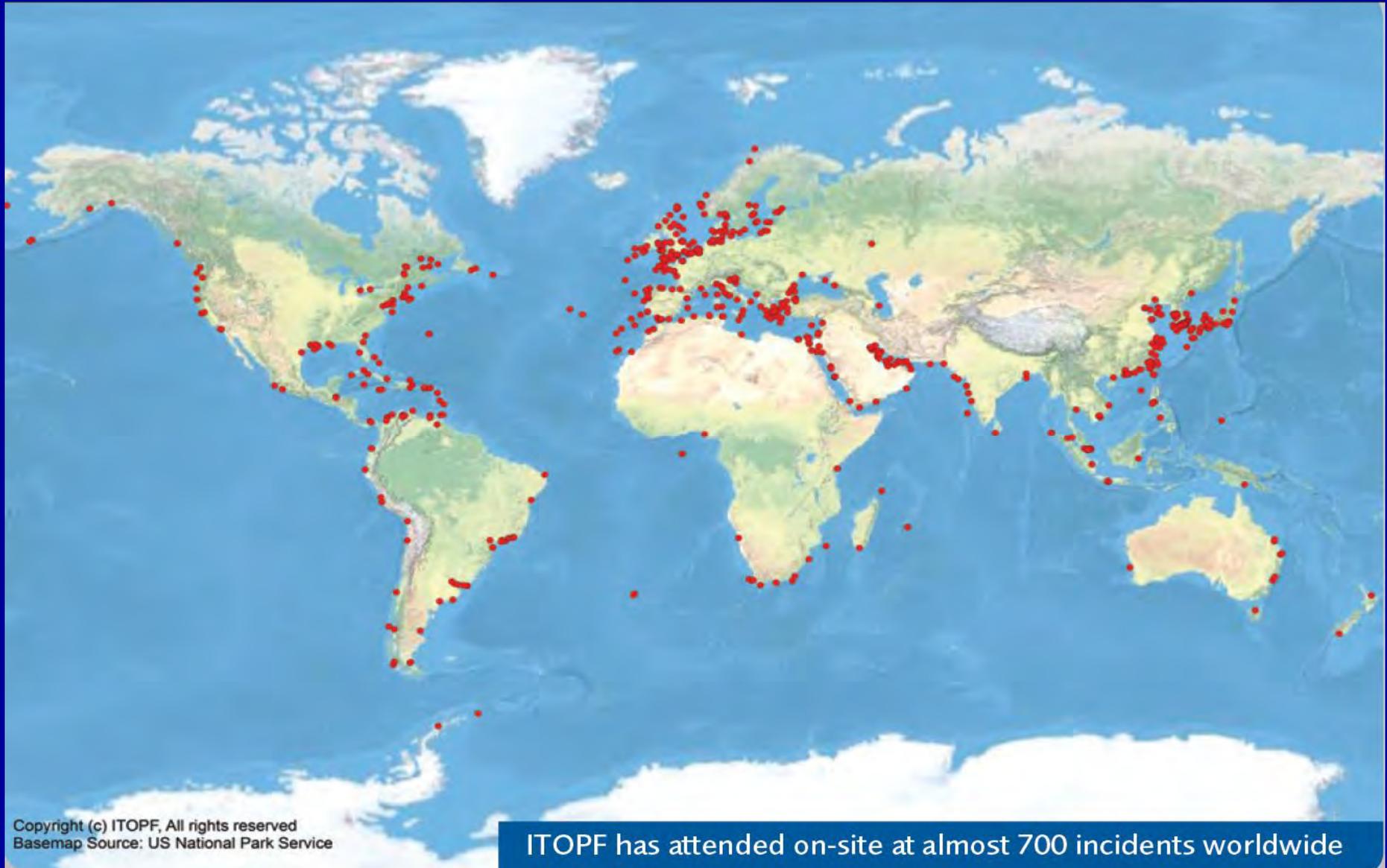
Institutional Arrangement of MERRAC



II. Oil and HNS Spill Risks in the NOWPAP Region

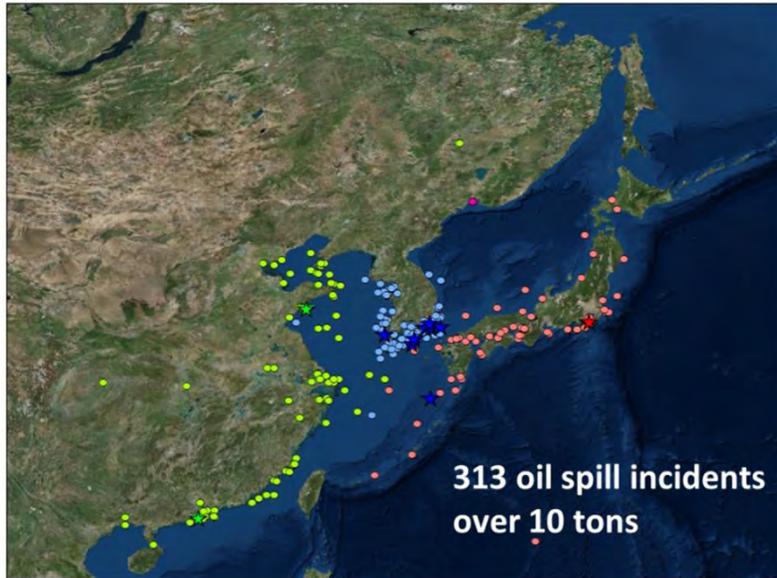


Oil and HNS Spill Incidents (ITOPF, 2012)

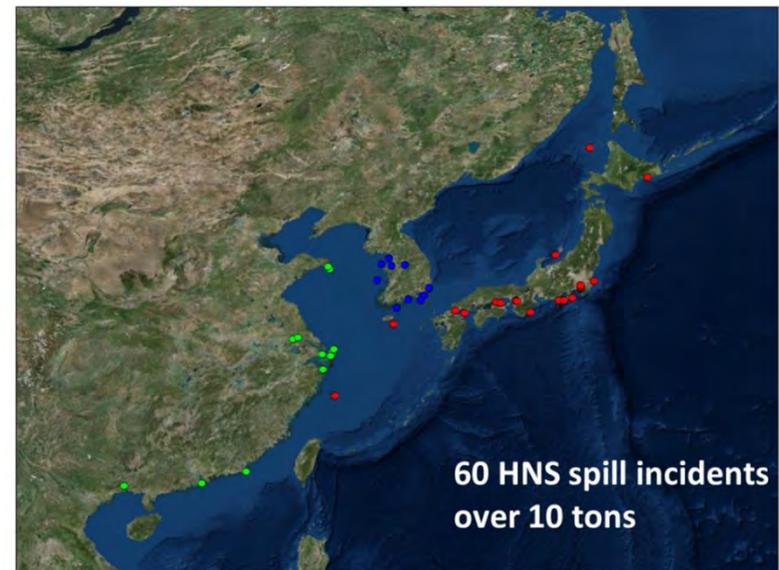


- **NOWPAP** sea is regarded as one of hot spot areas in the world...

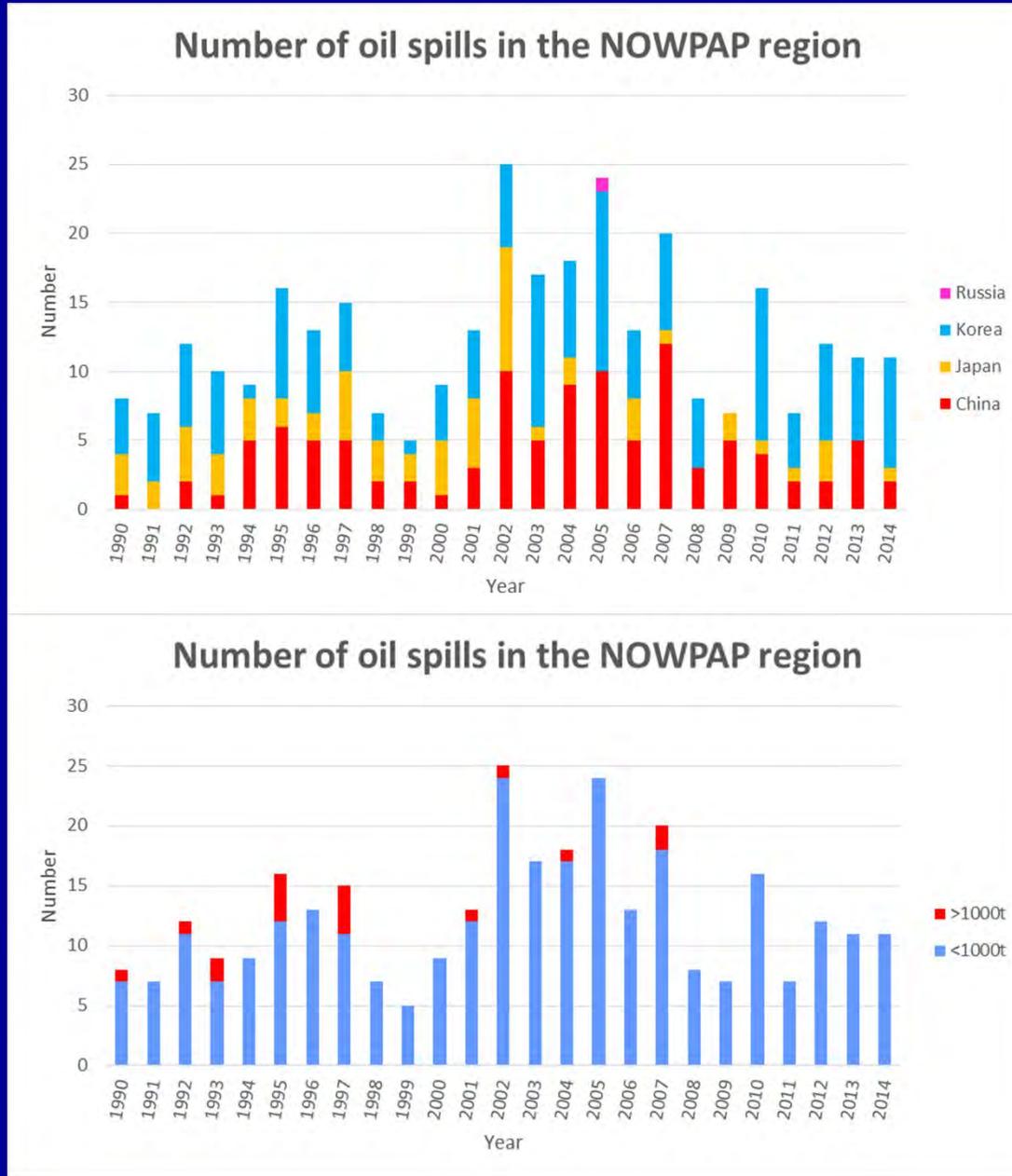
Location of Oil Spill Accidents (1990-2014)



- China
- Japan
- Korea
- Russia

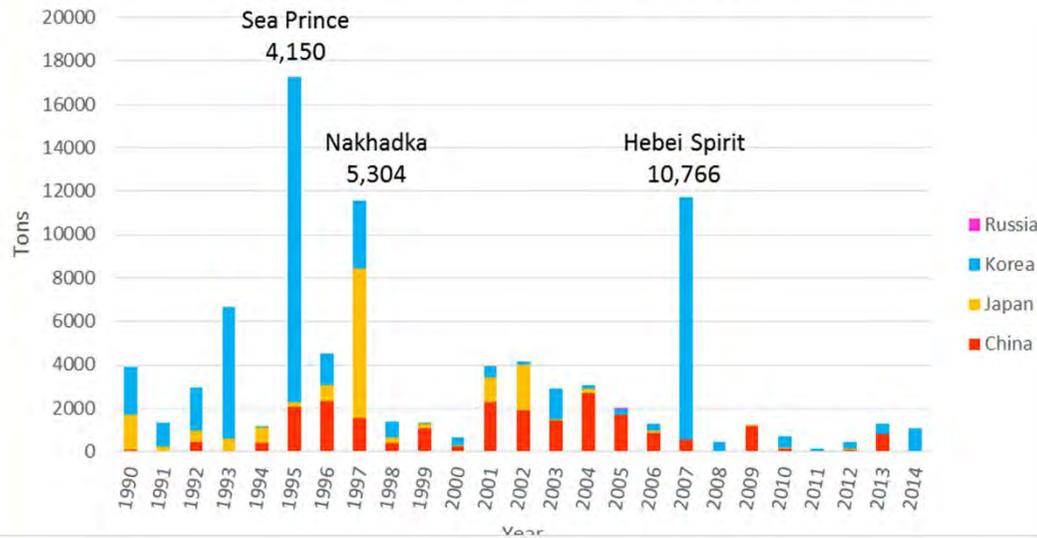


Statistics on Oil Spill Incidents (1990-2014)

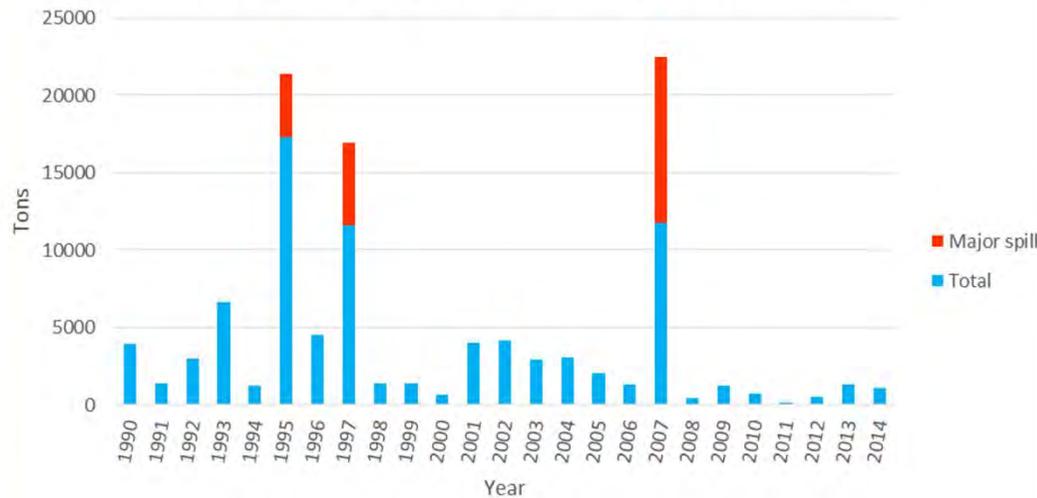


Statistics on Oil Spill Incidents (1990-2014)

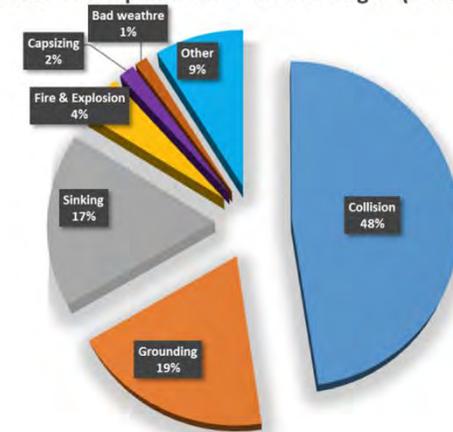
Quantity of oil spilled in the NOWPAP region



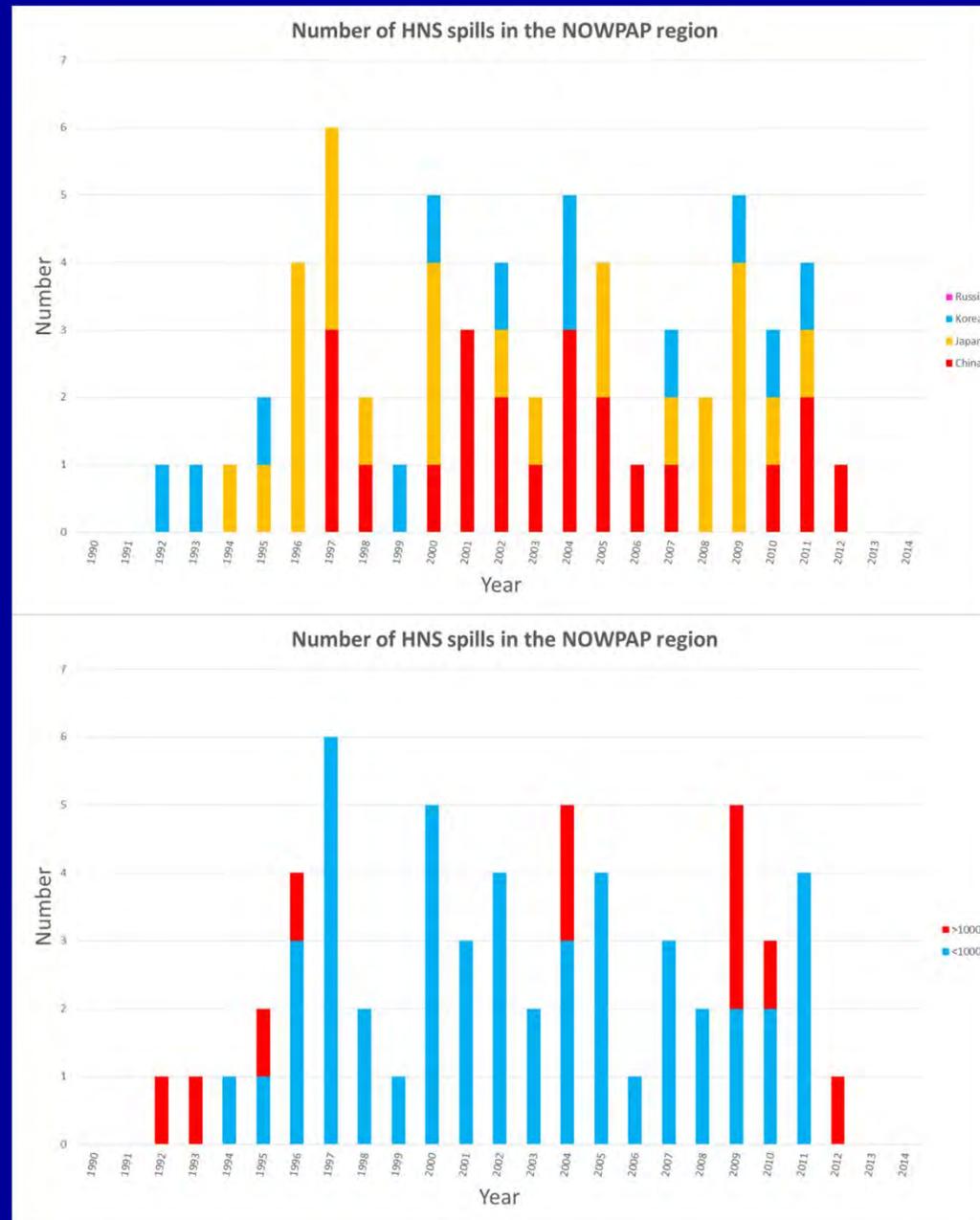
Quantity of oil spilled in the NOWPAP region



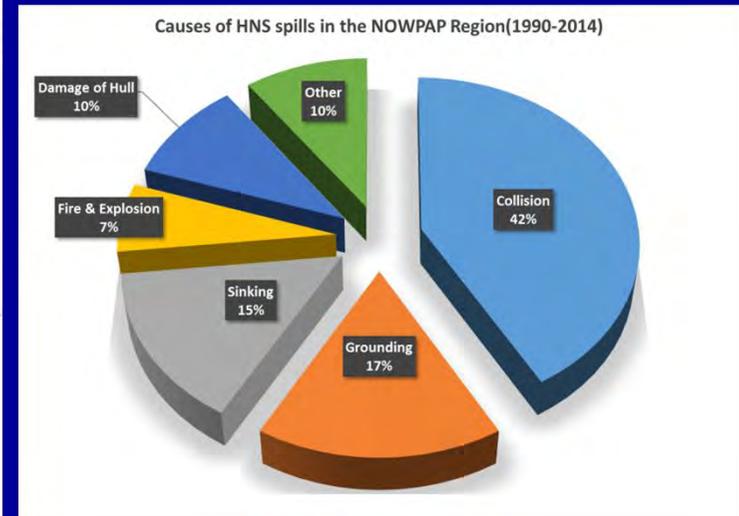
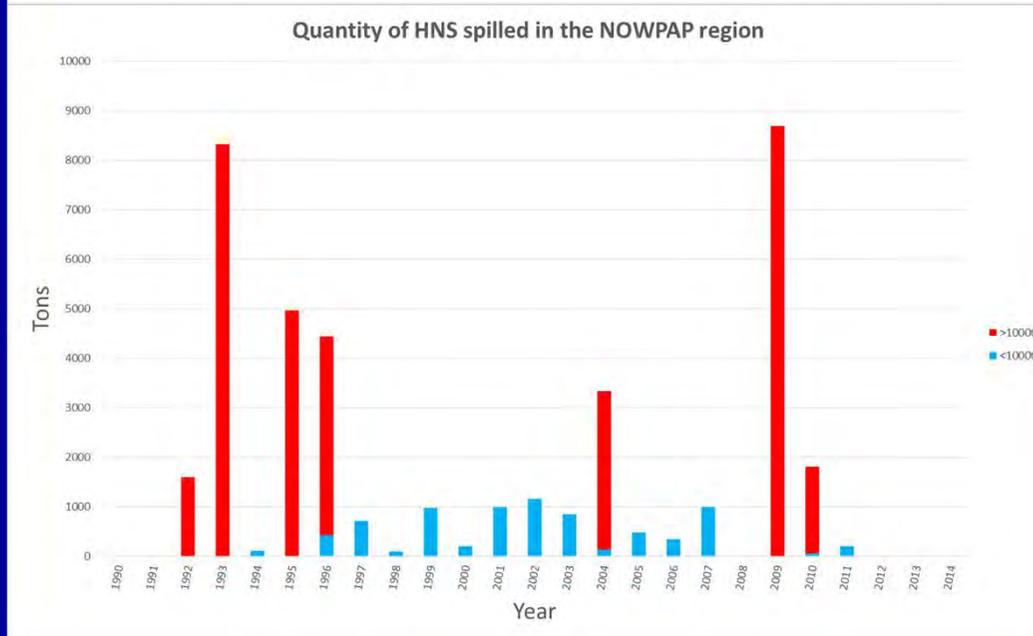
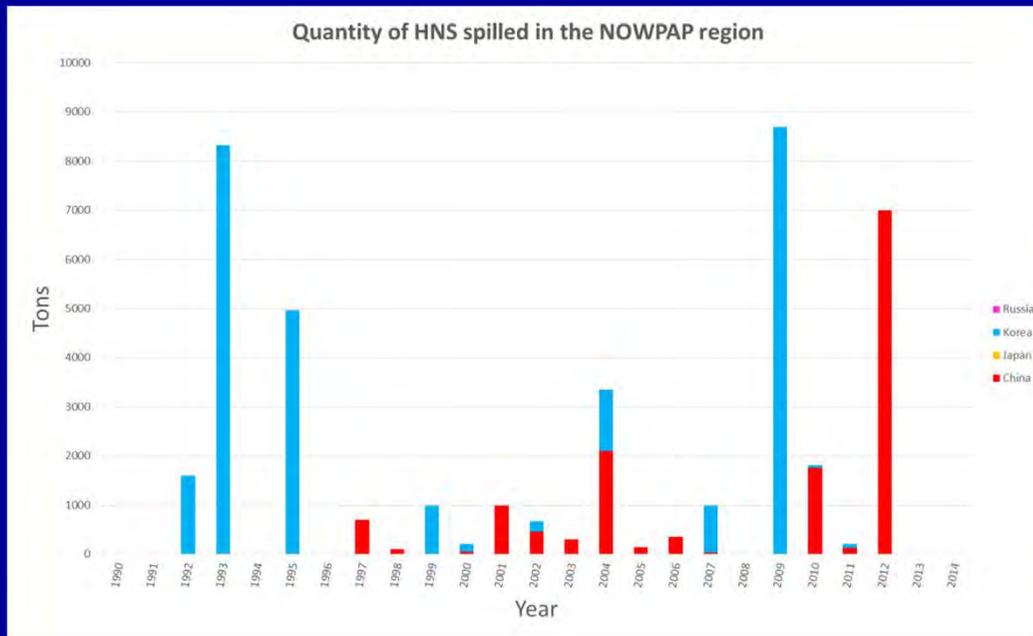
Causes of oil spills in the NOWPAP region(1990-2014)



Statistics on HNS Spill Incidents (1990-2014)



Statistics on HNS Spill Incidents (1990-2014)



III. NOWPAP Regional Oil & HNS Spill Contingency Plan

NOWPAP Regional Oil and HNS Spill Contingency Plan (RCP)



**Signatures of the MOU for the NOWPAP RCP
In Nov. 2004**

NOWPAP MERRAC



Northwest Pacific Action Plan
Marine Environmental Emergency Preparedness and Response
Regional Activity Centre

P.O. Box 23, Yuseong, Daejeon 305-600, Republic of Korea
(c/o MOERI/KORDI)
Tel: (+82-42) 868-7214, FAX: (+82-42) 868-7268
E-mail: nowpap@moeri.re.kr
<http://merrac.nowpap.org>

NOWPAP REGIONAL OIL AND HAZARDOUS & NOXIOUS SUBSTANCES SPILL CONTINGENCY PLAN

Note from MERRAC

The Plan was adopted by the 13th Intergovernmental Meeting of NOWPAP held in Jeju, Republic of Korea, 20-21 October 2008 (UNEP/NOWPAP IG. 13/9).

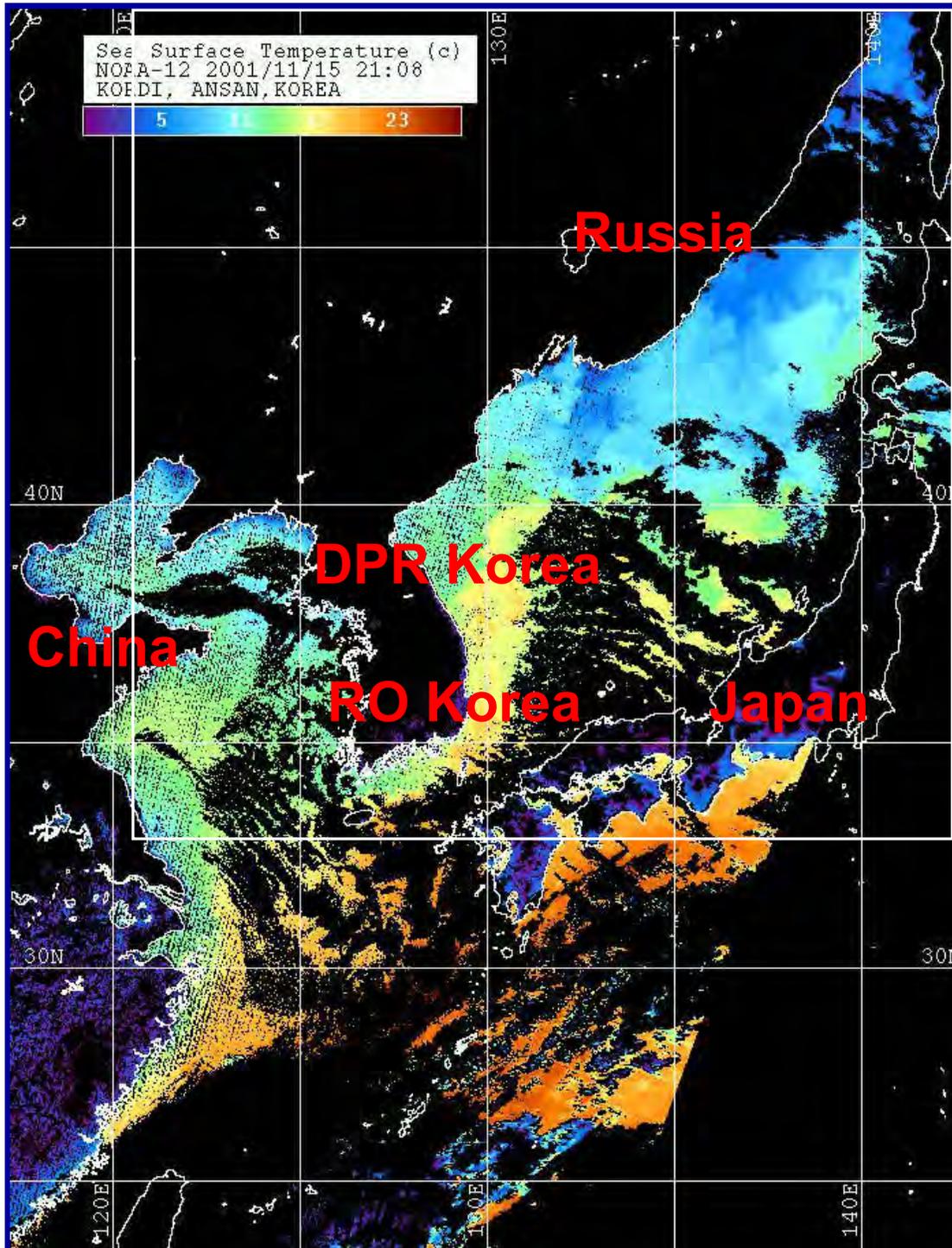
Purpose and Objectives

◆ Purpose

To provide a framework under which NOWPAP Members may co-operate at the operational level in responding to major oil spill incidents

◆ Overall objective

To provide an operational mechanism for mutual assistance through which the NOWPAP members will cooperate in order to coordinate and integrate their response to marine oil spill incidents which affect or seem likely to affect the Action Area of one or more of the NOWPAP Members and which exceeds the response capability of a NOWPAP member and the resource available to it.



Geographical coverage

- 33°N~55°N, 121°E~145°E
- Bordering 5 countries

Risks of Spill

- Oil and HNS traffic is dense
- Navigational dangers
- MERRAC maintains the information on main shipping routes, the amount of oil and HNS

Sensitivity

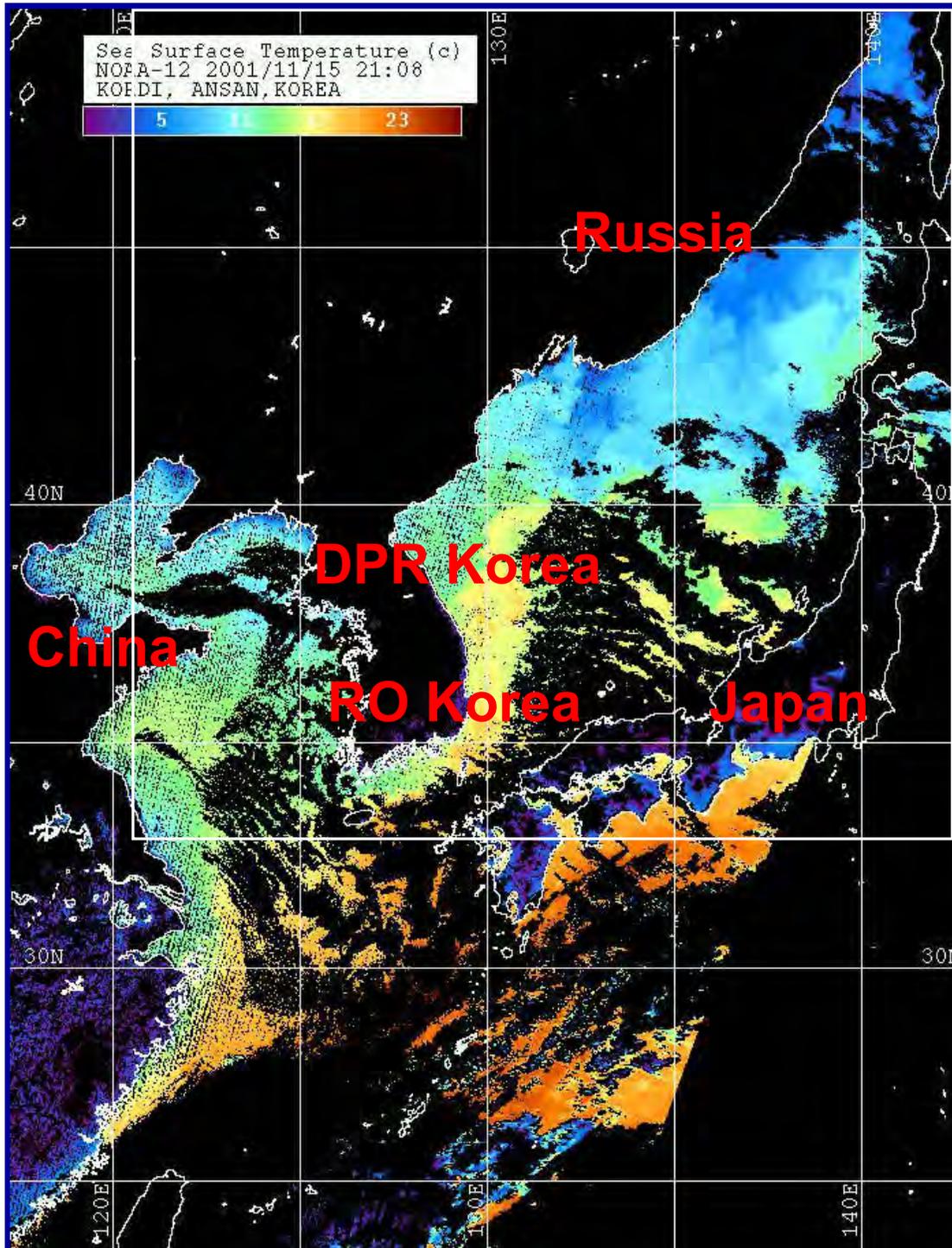
- Very sensitive to spill
- Fisheries, aquaculture, ecosystem, tourism, industry, salt marshes

Actions to be taken through the implementation of the RCP

- a) developing appropriate preparedness measures and effective systems for detecting and reporting pollution incidents affecting or likely to affect the Action Area of the NOWPAP Members;
- b) promoting and implementing regional co-operation in oil/HNS pollution contingency planning, prevention, control and clean-up operations;
- c) establishing a declared response capability in each Member to minimise the hazard posed by oil & HNS spills;
- d) developing and implementing a programme of training courses and practical exercises available for personnel of the NOWPAP Members involved in oil pollution prevention and combating; and
- e) developing procedures to increase regional co-operation.

Components of Contingency Plan

Risk Assessment	Strategic Policy	Operational Procedures	Administrative and Information Directory
Likelihood of a spill occurring : frequency : volume : risk	Response Techniques : Offshore : Shoreline	Notification	Prearrangement : Logistics, : Financing procedures : Customs & Immigration proc. : overflight : Health/Safety
Probable Consequence : Resources : Spill Effects	Response Resources : Equipment : Stockpiles : Waste storage	Evaluation : source : trajectory : Treat	
	Leadership, Command and Management	Initiation	Example documents
	Training and review procedures	Mobilisation	Supplementary Information
		Clean-up / Support	
		Progress Review/ Termination	



Geographical coverage

- 33°N~55°N, 121°E~145°E
- Bordering 5 countries

Risks of Spill

- Oil and HNS traffic is dense
- Navigational dangers
- MERRAC maintains the information on main shipping routes, the amount of oil and HNS

Sensitivity

- Very sensitive to spill
- mariculture, fish farms, fisheries, wildlife, tourism, industry, salt marshes

Basis for the Plan

- ◆ NOWPAP Members should have:
 - their own **National Contingency Plan (NCP)**
 - **Resources** to respond to marine oil spills
- ◆ Response to a pollution incident within the Action Area of a NOWPAP Member should be:
 - with the **provisions of NCP of that Member**
 - with the **laws and regulations of that Member**
- ◆ Each member should designate the following:
 - **CNA(s), NOCP(s), ADA**

◆ **For prompt and effective response, NOWPAP Members should exchange information on:**

- **Competent National Authorities, Operational Contact Points and Assistance Decision Authority**
- **sources of spills and vulnerable resources**
- **inventory of pollution response equipment and products**
- **directory of experts, trained personnel and Strike Teams**
- **rules concerning the use of dispersants**
- **logistic support available within the Member**
- **NCPs of the NOWPAP Members**
- **maps showing the main environmentally sensitive areas**

Activation of the Plan and Requests for Assistance

- ◆ **Co-operation in pollution response operations** has been divided into four distinct phases:
 - . Phase I – Notification
 - . Phase II – Evaluation and activation of the Plan
 - . Phase III – Joint Response Operation at sea
 - . Phase IV – Joint Response Operation on shoreline

Operational Responsibilities

- ◆ **Lead Member** (taking the lead role) should:
 - activate the Plan
 - ask for assistance within the framework of the Plan
 - designate the **Lead On-Scene Co-ordinator (LOSC)**
 - assess and forecast the situation
 - report the result to other NOWPAP Members

Coordination Structure And Liaison



Administration, Logistics and Funding

◆ The Plan requests to pre-arrange requirements necessary for Joint Response Operation such as:

- Logistics
- Financial Procedures
- Customs and immigration procedures
- Overflight and navigation procedures
- Health and safety
- Medical Insurance and medical assistance
- Documentation of response operations and related costs

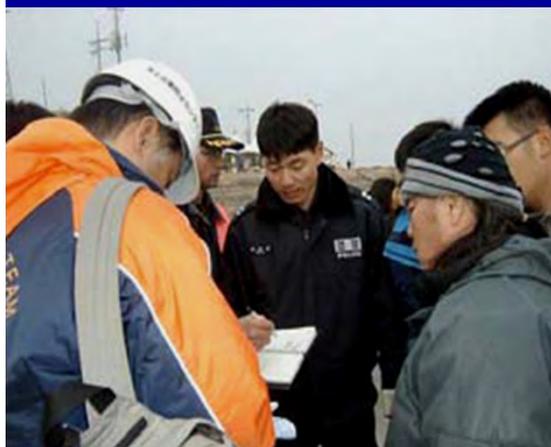
ANNEXES to the Plan

- ◆ **Annex 1.** Directory of Competent National Authorities
National Operational Contact Points
and Assistance Decision Authorities
- ◆ **Annex 2.** Communications Plan
- ◆ **Annex 3.** National Contingency Plan of Participating Members
(People's Republic of China, Japan,
Republic of Korea, Russian Federation)
- ◆ **Annex 4.** NOWPAP Pollution Reports (NOWPAP POLREPs)
- ◆ **Annex 5.** Guidelines for Reporting Oil Spills
- Aerial Surveillance
- ◆ **Annex 6.** Claims Manual
- ◆ **Annex 7.** Post-Incident Report
- ◆ **Annex 8.** Regional Activity Centre-Terms of Reference
- ◆ **Annex 9.** The list of examples of HNS to be covered under the PPlan

Case of Activation of RCP

Hebei Spirit Incident (2007.12)

- **Activation of the NOWPAP RCP upon the request by Korea:**
 - . Notification to NOWPAP members about the spill and request for assistance
- **Support from NOWPAP Members: resource mobilization**
 - . China (56 tons) & Japan (10tons) of absorbents
- **Support from UN/EC, JCG and USCG**
 - . UN/EC expert briefings (assessed as a “very successful response”)



MERRAC's Activities

on regional cooperation in marine pollution preparedness and response

- Regional activities related to the **development of effective measures for regional cooperation** in marine pollution preparedness and response in the NOWPAP region
- The secretariat for **NOWPAP MERRAC Focal Points Meeting and the NOWPAP Regional Oil & HNS Spill Contingency Plan**
- **Cooperation** with NOWPAP RCU, IMO, and other international/regional organizations
- **Special activities** designated under its Terms of Reference (TOR)

Organization of MERRAC Focal Points Meetings and Competent National Authorities Meetings

- Review of MERRAC activities
- Update of RCP, including relevant annexes
- Report on oil and HNS pollution incidents
- Update of the Information System
- Planning of the training and exercises, etc



Organization of Experts Meetings

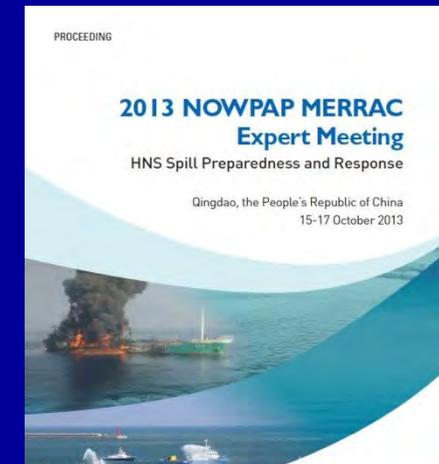
- To undertake specific advisory functions relating to scientific and technical issues on oil/HNS in implementing the regional cooperation in the region.
 - 2010 Expert Meeting (Forum on Sakhalin Projects, Wakkanai, Japan, September 2010)
 - 2013 Expert Meeting on HNS Spill Preparedness and Response (Qingdao, Russia, October 2013)
 - 2015 Expert meeting on Response to oiled wildlife (Vladivostok, Russia, October 2015)



2005 MERRAC EM
Incheon, Korea



2009 MERRAC EM
Hokkaido, Japan



2013 MERRAC EM
Qingdao, China (HNS)

Conduction of Exercises



Table top exercise



NOWPAP Regional OPRC Training course

- ◆ NOWPAP BRAVO Exercise: Twice/year
- ◆ Table top exercise (during CNA meetings)
- ◆ NOWPAP Regional OPRC training course (IMO Level 2)

◆ NOWPAP DELTA Exercises

- ✓ 1st DELTA Exercise ('06, Russia/Japan, Sakhalin, Russia)
- ✓ 2nd DELTA Exercise ('08, China/Korea, Qingdao, China)
- ✓ 3rd DELTA Exercise ('10, Japan/Russia, Wakkanai, Japan)
- ✓ 4th DELTA Exercise ('12, Korea/China, Yeosu, Korea)
- ✓ 5th DELTA Exercise ('14, Russia/Japan, Vladivostok, Russia)



List of POLREP issued in 2013-2015

<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>P.O. Box 23, Yuseong, Daejeon 305-343, Republic of Korea (c/o MOERI/KIOS) Tel: +82-42-866-3638 Fax: +82-42-866-3630 E-mail: nowpap@kiost.ac Website: http://merrac.nowpap.org</p>	<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>P.O. Box 23, Yuseong, Daejeon 305-343, Republic of Korea (c/o MOERI/KIOS) Tel: +82-42-866-3638 Fax: +82-42-866-3630 E-mail: nowpap@kiost.ac Website: http://merrac.nowpap.org</p>	<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>P.O. Box 23, Yuseong, Daejeon 305-343, Republic of Korea (c/o KRISO) Tel: +82-42-866-3638 Fax: +82-42-866-3630 E-mail: nowpap@kriso.re.kr Website: http://merrac.nowpap.org</p>	<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>JAPAN COAST GUARD Marine Environment Protection & Disaster Prevention Division 2-1-3 Shimo-Ogino, Chiyoda-ku, Tokyo, 100-0018, JAPAN Tel: +81-3-3553-9119 Fax: +81-3-3554-5055</p> <p>From: JP/CG (Japan Coast Guard) Marine Environment Protection & Disaster Prevention Division, Guard and Rescue Department E-MAIL: jcgbosai4-4i4@mailt.go.jp</p>
<p>Address: Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>Date Time Group:</p> <p>Identification Serial Number:</p> <p>Contents:</p> <p>1 DATE AND TIME</p> <p>2 POSITION</p> <p>3 INCIDENT</p> <p>4 OUTFLOW</p> <p>44 WIND DIRECTION AND SPEED</p> <p>46 SEA STATE AND VISIBILITY</p> <p>60 ACKNOWLEDGE</p> <p>Yours sincerely,</p> <p><i>Seong-Gil Kang</i></p> <p>Dr. Seong-Gil Kang Acting Director Marine Environmental Centre of the Northwest Pacific Action Plan (NOWPAP MERRAC)</p>	<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>P.O. Box 23, Yuseong, Daejeon 305-343, Republic of Korea (c/o MOERI/KIOS) Tel: +82-42-866-3638 Fax: +82-42-866-3630 E-mail: nowpap@kiost.ac Website: http://merrac.nowpap.org</p> <p>Address: Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>Date Time Group:</p> <p>Identification Serial Number:</p> <p>Contents:</p> <p>1 DATE AND TIME</p> <p>2 POSITION</p> <p>3 INCIDENT</p> <p>4 OUTFLOW</p> <p>41 POSITION AND EXTENT OF POLLUTION ABOVE/IN THE SEA</p> <p>42 CHARACTERISTICS OF POLLUTION</p> <p>43 SOURCES AND CAUSE OF POLLUTION</p> <p>44 WIND DIRECTION AND SPEED</p> <p>46 SEA STATE AND VISIBILITY</p> <p>51 PHOTOGRAPHS OR SAMPLES</p> <p>60 ACKNOWLEDGE</p> <p>Yours sincerely,</p> <p><i>Seong-Gil Kang</i></p> <p>Dr. Seong-Gil Kang Director Marine Environmental Emergency Preparedness and Response Regional Activity Centre of the Northwest Pacific Action Plan (NOWPAP MERRAC)</p>	<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>P.O. Box 23, Yuseong, Daejeon 305-343, Republic of Korea (c/o KRISO) Tel: +82-42-866-3638 Fax: +82-42-866-3630 E-mail: nowpap@kriso.re.kr Website: http://merrac.nowpap.org</p> <p>Address: KOREA COAST GUARD Marine Pollution Response Planning Division 3-8 Songdo-Dong, Yeosu-Gu, Incheon, TEL: 82-32-835-2293 / FAX: 82-32-835-2293</p> <p>Date Time Group:</p> <p>Identification Serial Number:</p> <p>Contents:</p> <p>1 DATE AND TIME</p> <p>2 POSITION</p> <p>3 INCIDENT</p> <p>4 OUTFLOW</p> <p>41 POSITION AND EXTENT OF POLLUTION ABOVE/IN THE SEA</p> <p>42 CHARACTERISTICS OF POLLUTION</p> <p>43 SOURCES AND CAUSE OF POLLUTION</p> <p>44 WIND DIRECTION AND SPEED</p> <p>46 SEA STATE AND VISIBILITY</p> <p>60 ACKNOWLEDGE</p> <p>Yours sincerely,</p> <p><i>Seong-Gil Kang</i></p> <p>Dr. Seong-Gil Kang Director Marine Environmental Emergency Preparedness and Response Regional Activity Centre of the Northwest Pacific Action Plan (NOWPAP MERRAC)</p>	<p>NOWPAP MERRAC</p> <p>Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre</p> <p>P.O. Box 23, Yuseong, Daejeon 305-343, Republic of Korea (c/o KRISO) Tel: +82-42-866-3638 Fax: +82-42-866-3630 E-mail: nowpap@kriso.re.kr Website: http://merrac.nowpap.org</p> <p>Address: KOREA COAST GUARD, MPSS Marine Pollution Response Planning Division 3-8 Songdo-Dong, Yeosu-Gu, Incheon-Gu, Korea 405-241 TEL: 82-32-835-2293 / FAX: 82-32-835-2991 / www.kcg.go.kr</p> <p>Date Time Group:</p> <p>Identification Serial Number:</p> <p>Contents:</p> <p>1 DATE AND TIME</p> <p>2 POSITION</p> <p>3 INCIDENT</p> <p>4 OUTFLOW</p> <p>41 EXTENT OF POLLUTION ON/ABOVE/IN THE SEA</p> <p>42 CHARACTERISTICS OF POLLUTION</p> <p>43 SOURCE AND CAUSE OF POLLUTION</p> <p>44 WIND DIRECTION AND SPEED</p> <p>46 SEA STATE AND VISIBILITY</p> <p>48 FORECAST OF LIKELY EFFECT OF POLLUTION AND ZONES AFFECTED</p> <p>49 IDENTIFICATION OF OBSERVER AND SHIPS ON SCENE</p> <p>50 ACTION TAKEN</p> <p>60 ACKNOWLEDGE</p> <p>Yours sincerely,</p> <p><i>Seong-Gil Kang</i></p> <p>Dr. Seong-Gil Kang Director Marine Environmental Emergency Preparedness and Response Regional Activity Centre of the Northwest Pacific Action Plan (NOWPAP MERRAC)</p>

Implementation of MERRAC specific projects

- To facilitate the designated mandates of MERRAC
- Expert groups consisted of NOWPAP members: technical advice
- Guideline on sensitivity mapping, shoreline cleanup, use of dispersants
- Minimum level of preparedness, oil spill prediction model



Collection and dissemination of information



NOWPAP MERRAC
Northwest Pacific Action Plan
Marine Environmental Emergency Preparedness and Response
Regional Activity Centre

Home | Log in | Contact us
NOWPAP Member States:
China, Japan, South Korea, Russia

HOME | About MERRAC | Activities | Contingency Plan | Publication | Link

:: MERRAC NEWS

NOWPAP Brainstorming Workshop on Biodiversity
Dr. Seong-Gil KANG and Dr. Jeong-Hwan OH have attended the NOWPAP Brainstorming Works....

Shanghai International Maritime Forum 2009
China Maritime Safety Administration (MSA) has organized Shanghai International Marit....

International Workshop on the Response to Marine Pollution in the NOWPAP Region
As MERRAC Expert Meeting 2009, the International Workshop on the Response to Marine P....

:: SAVE OUR SEA (SOS)

Hebel Spirit Incident (7 December 2007)
An oil spill incident occurred in Taean coastal area, near the port of Incheon, Repub....

<http://merrac.nowpap.org>

- ◆ Information on Focal Points and Organizations
- ◆ Database on Response equipment
 - Oil recovery boat
 - Oil recovery system
 - Oil booms
 - Aircraft
- ◆ National laws related to the use of the response equipment
 - Oil transfer pump
 - Beach cleaner
 - Dispersant
 - Sorbents

Current projects ('14-15)

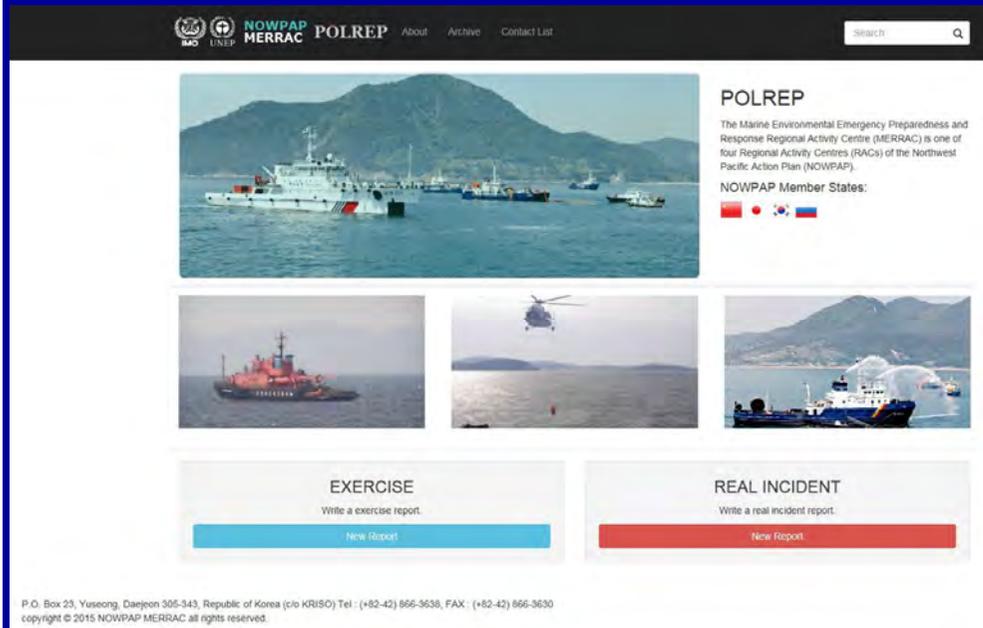
◆ Update of DB on Oil and HNS Spill Response Equipment and Experts

- to standardize terminology and detailed information related to oil and HNS spill response equipment and experts
- to facilitate request and assistance of the equipment and experts inventories
- Reviewed the applicability of the guidance for International Offers of Assistance in Response to a marine oil pollution incident (IOA) of IMO into the MERRAC DB of response equipment and experts

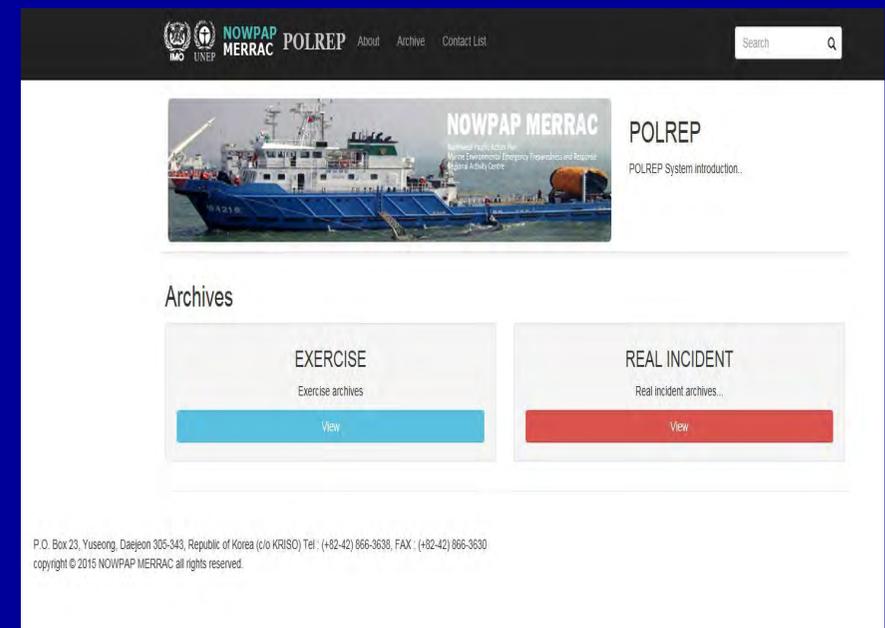
◆ Online Pollution Reporting System

- To facilitate the exchange of information of the incident (POLREP) among the NOWPAP members
- To be able to check the delivery status
- To use in both the real incidents and exercises
- To electronically archive the POLREPs

➤ Developed an Online Pollution Reporting System

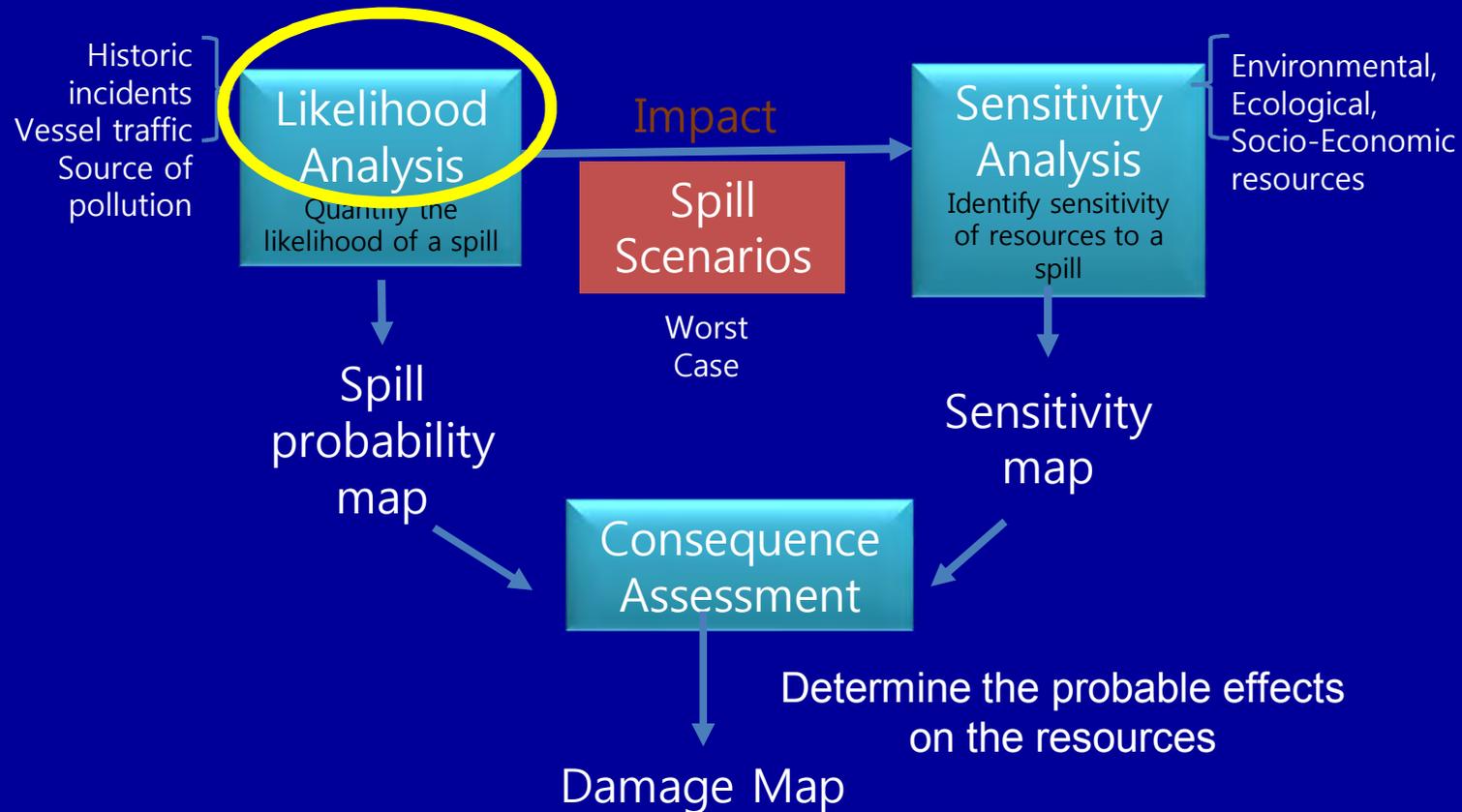


The screenshot shows the homepage of the NOWPAP POLREP system. At the top, there is a navigation bar with logos for IMO, UNEP, NOWPAP, MERRAC, and POLREP, along with links for 'About', 'Archive', and 'Contact List'. A search bar is located on the right. The main content area features a large banner image of a ship at sea. To the right of the banner, the text reads: 'POLREP The Marine Environmental Emergency Preparedness and Response Regional Activity Centre (MERRAC) is one of four Regional Activity Centres (RACs) of the Northwest Pacific Action Plan (NOWPAP). NOWPAP Member States: [Flags of Japan, South Korea, and the United States]'. Below the banner are three smaller images: a red oil tanker, a helicopter, and a ship with a fire. At the bottom, there are two buttons: 'EXERCISE Write a exercise report. New Report' and 'REAL INCIDENT Write a real incident report. New Report'.



The screenshot shows the 'Archives' page of the NOWPAP POLREP system. The navigation bar is identical to the home page. The main content area features a banner image of a ship at sea with the text 'NOWPAP MERRAC POLREP POLREP System introduction.'. Below the banner, there are two buttons: 'EXERCISE Exercise archives View' and 'REAL INCIDENT Real incident archives... View'.

◆ Risk Assessment of Oil Spill Incident: Likelihood Analysis



V. Summary and Conclusions

- Under the framework of the NOWPAP RCP, the NOWPAP members worked together to enhance the regional cooperation to develop efficient countermeasures to minimize the hazard to be imposed by the major oil spills in the region.
- MERRAC, as the Secretariat of all the activities imposed under the RCP, has successfully supported the NOWPAP members in strengthening the regional cooperation and enhancing the regional capacity for oil and HNS pollution preparedness and response.

- For this, MERRAC has been implementing specific projects and conducting exercises on a regular basis, as well as facilitating the exchange of relevant information among the Members, in order to increase level of preparedness in the region.
- As the volume of the spills is increasing, the preparedness and response capacity is required more and more at the regional level.
- Among others, development of expertise and sharing of information is one of the crucial components in increasing the level of preparedness and response capacity.



Save our Seas

